

Safety data sheet

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER

Product name

MEKOL D4 komponenta B

Name: Aluminum chloride, basic (CAS: 1327-41-9, EC: 215-477-2)

REACH Registration number: 01-2119531563-43

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses

Crosslinker - B component for water resistant adhesives

Uses advised against

No information.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier

MITOL, tovarna lepil, d.o.o., Sežana
Partizanska c. 78
6210 Sežana, Slovenia
+386 5 73 12 300 (8:00-16:00)
lilijana.kocjan@mitol.si

1.4 EMERGENCY TELEPHONE NUMBER

Emergency

112

Supplier

+386 5 73 12 300 (8:00-16:00)



<https://my.chemius.net/p/0uvAxW/en/pd/en>

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008 (CLP)

Met. Corr. 1; H290 May be corrosive to metals.

Eye Dam. 1; H318 Causes serious eye damage.

2.2 LABEL ELEMENTS

Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: DANGER

H290 May be corrosive to metals.

H318 Causes serious eye damage.

P234 Keep only in original packaging.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P390 Absorb spillage to prevent material damage.

Contains:

Aluminum chloride, basic

2.3 OTHER HAZARDS

PBT/vPvB

No information.

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Additional information

The substances in the product are not classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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3.1 SUBSTANCES

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
Aluminum chloride, basic	1327-41-9 215-477-2 - 01-2119531563-43	ca. 30	Met. Corr. 1; H290 Eye Dam. 1; H318	/	/

3.2 MIXTURES

For substances see 3.1.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General notes

Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency. When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician.

Following inhalation

Remove patient to fresh air - move out of dangerous area. If symptoms occur, seek medical advice.

Following skin contact

Immediately remove contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water. If symptoms develop and persist, seek medical attention. Wash contaminated clothes and shoes before reuse.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. After initial flushing, remove any contact lenses and continue flushing. Consult a physician immediately!

Following ingestion

Rinse mouth with water and drink 1-2 glasses (2.5-3 dl) of water. Do not induce vomiting! Consult a physician. Show the physician the safety data sheet or label.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Following inhalation

Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation. Coughing, sneezing, nasal discharge, labored breathing.

Following skin contact

Contact with skin may cause irritation (redness, itching).

Following eye contact

Redness, pain, burning sensation, tearing, can cause permanent damage to the eyes. Causes burns: signs/symptoms include corneal damage, burns, pain, lacrimation, corrosive effects, partial or complete loss of sight.

Following ingestion

Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area. May cause nausea/vomiting and diarrhea.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product itself is not flammable.

Unsuitable extinguishing media

Full water jet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke. In case of heating harmful vapours/gases can be generated.

5.3 ADVICE FOR FIREFIGHTERS

Protective actions

In case of fire or heating do not breathe fumes/vapours. Cool containers at risk with water spray. If possible remove containers from endangered area.

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Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

Extinguishing water which has been in contact with the product may be corrosive. Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation.

Emergency procedures

Evacuate personnel to safe areas, away from the direction of the wind. Prevent access to unprotected personnel. Prevent access to unauthorised personnel. Avoid contact with spilled product or contaminated surfaces.

For emergency responders

Use personal protective equipment.

6.2 ENVIRONMENTAL PRECAUTIONS

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

For containment

No information.

For cleaning up

Stop leak if without risk. Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Dispose in accordance with applicable regulations (see Section 13).

Other information

No information.

6.4 REFERENCE TO OTHER SECTIONS

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

Other measures

No information.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/mist. Wear suitable protective equipment; see Section 8. Remove contaminated clothes and wash them before reuse.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Technical measures and storage conditions

Store in accordance with local regulations. Keep in tightly closed container. Keep in a cool, dry and well ventilated place. Protect against heat and direct sunlight. Keep away from strong oxidising agents. Store away from strong reducing agents. Do not store together with metals. Keep away from food, drink and animal feeding stuffs.

Packaging materials

The original container of producer.

Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking. The floor of the storage room must be impermeable and dam spilled

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liquid. An eye wash station and safety shower must be available where this product is used.

Storage class

No information.

Further information on storage conditions

No information.

7.3 SPECIFIC END USE(S)

Recommendations

See identified uses in Section 1.2.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Occupational Exposure limit values

No information.

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	value
Aluminum chloride, basic	Worker	inhalation	long term systemic effects	/	16.4 mg/m ³
Aluminum chloride, basic	Worker	dermal	long term systemic effects	/	4.6 mg/kg bw/day
Aluminum chloride, basic	Consumer	inhalation	long term systemic effects	/	4 mg/m ³
Aluminum chloride, basic	Consumer	dermal	long term systemic effects	/	2.32 mg/kg bw/day
Aluminum chloride, basic	Consumer	oral	long term systemic effects	/	2.3 mg/kg bw/day

PNEC values

For product

No information.

For components

No information.

8.2 EXPOSURE CONTROLS

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Handle in accordance with good industrial hygiene and safety practice. Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse. Keep eyewash bottles or personal eyewash units and emergency showers available.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

Personal protective equipment

Eye and face protection

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Wear tight fitting protective goggles and/or face protection (EN 166).

Hand protection

Protective gloves (EN 374). Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Nitrile	/	/	/

Skin protection

Wear suitable protective clothing. Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345). At higher exposures wear chemical-resistant clothing (BS EN 13034:2005+A1:2009) and boots, natural rubber (BS EN ISO 20345:2011).

Respiratory protection

Not needed under normal use and adequate ventilation. In case of insufficient ventilation wear suitable respiratory protection. Protective mask (EN 136: 1998) or half mask (EN 140: 1999) with filter B (EN 14387: 2004).

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

No information.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Important health, safety and environmental information

Physical state	liquid
Shape	No information.
Colour	light yellow
Odour	No data.
Odour threshold	No information.
Melting/freezing point	-20 °C
Boiling point or initial boiling point and boiling range	> 100 °C
Flammability (solid, gas)	No information.
Explosion limits (vol%)	No information.
Flash point	No information.
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity (dynamic)	40 mPas at 20 °C
Solubility	No information.
Partition coefficient n-octanol/water (log value)	No information.
Vapour pressure	No information.
Density	1.2 — 1.3 g/cm ³
Relative vapour/gas density	No information.
Particle characteristics	No information.

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9.2 OTHER INFORMATION

Information with regard to physical hazard classes

No information.

Other safety characteristics

No information.

Other information

It can be corrosive to metals.

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

May be corrosive to metals.

10.2 CHEMICAL STABILITY

Product is stable under normal conditions of use, recommended handling and storage conditions. Thermal decomposition: more than 200°C.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

May be corrosive to metals.

10.4 CONDITIONS TO AVOID

Keep away from heat and sources of ignition. Avoid contact with incompatible materials.

10.5 INCOMPATIBLE MATERIALS

Strong oxidising agents. Strong reducing agents.

Metals.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released. Hydrogen chloride.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
Aluminum chloride, basic	oral	LD ₅₀	rat	/	> 2000 mg/kg /		/
Aluminum chloride, basic	dermal	LD ₅₀	rat	/	> 2000 mg/kg /		/

Additional information

The product is not classified as acutely toxic.

(b) Skin corrosion/irritation

No information.

Additional information

The product is not classified as irritating to the skin. May cause skin irritation.

(c) Serious eye damage/irritation

No information.

Additional information

Causes serious eye damage.

(d) Respiratory or skin sensitisation

No information.

Additional information

The product is not classified as sensitising.

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

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(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure

No information.

Additional information

STOT SE (single exposure): Not classified.

(i) STOT-repeated exposure

No information.

Additional information

STOT RE (repeated exposure): Not classified.

(j) Aspiration hazard

No information.

Additional information

Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
Aluminum chloride, basic	LC ₅₀	> 0.42 mg/L	96 h	fish	<i>Danio rerio</i>	OECD 203	Dissolved aluminium
Aluminum chloride, basic	EC ₅₀	> 200 mg/L	48 h	crustacea	<i>Daphnia magna</i>	OECD 202	/

Chronic (long-term) toxicity

No information.

12.2 PERSISTENCE AND DEGRADABILITY

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

No information.

Additional information

This material is inorganic and not subject to biodegradation.

12.3 BIOACCUMULATIVE POTENTIAL

Partition coefficient n-octanol/water (log value)

No information.

Bioconcentration factor (BCF)

No information.

12.4 MOBILITY IN SOIL

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Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 RESULTS OF PBT AND VPVB ASSESSMENT

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6 ENDOCRINE DISRUPTING PROPERTIES

The product does not contain substances with the potential for endocrine disorders.

12.7 OTHER ADVERSE EFFECTS

No information.

12.8 ADDITIONAL INFORMATION

For product

Do not allow to reach ground water, water courses or sewage system. Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Product / Packaging disposal

Waste chemical

Dispose of in accordance with applicable waste disposal regulation. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Do not allow product to reach drains/sewage systems.

Waste codes / waste designations according to LoW

No information.

Packaging

Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

No information.





Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 2581	UN 2581	UN 2581	UN 2581
14.2 UN proper shipping name			
ALUMINIUM CHLORIDE SOLUTION	ALUMINIUM CHLORIDE SOLUTION	ALUMINIUM CHLORIDE SOLUTION	ALUMINIUM CHLORIDE SOLUTION
14.3 Transport hazard class(es)			
8	8	8	8
			
14.4 Packing group			



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ADR/RID	IMDG	IATA	ADN
III	III	III	III
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities 5 L Packing Instructions P001, IBC03, LP01, R001 Transport category 3 Tunnel restriction code (E) Classification code C1	Limited quantities 5 L EmS F-A, S-B	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y841 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 1 L Packing Instructions (Pkg Inst) 852 Maximum Net Quantity/Package (Max Net Qty/Pkg) 5 L Special provisions A3, A803	Limited quantities 5 L
14.7 Maritime transport in bulk according to IMO instruments			
	Goods may not be carried in bulk in bulk containers, containers or vehicles.		

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)
- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

No information.

15.2 CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

2.3 Other hazards 4.1 Description of first aid measures 6.3 Methods and material for containment and cleaning up 8.2 Exposure controls 9.1 Information on basic physical and chemical properties 9.2 Other information 10.5 Incompatible materials 11.2 Information on other hazards 12.3 Bioaccumulative potential 12.6 Endocrine disrupting properties 13.1 Waste treatment methods 14. Transport information 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data

No information.

Abbreviations and acronyms

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ATE - Acute Toxicity Estimate

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

CEN - European Committee for Standardisation

C&L - Classification and Labelling

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

CAS# - Chemical Abstracts Service number

CMR - Carcinogen, Mutagen, or Reproductive Toxicant

CSA - Chemical Safety Assessment

CSR - Chemical Safety Report

DMEL - Derived Minimal Effect Level

DNEL - Derived No Effect Level

DPD - Dangerous Preparations Directive 1999/45/EC

DSD - Dangerous Substances Directive 67/548/EEC

DU - Downstream User

EC - European Community

ECHA - European Chemicals Agency

EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)

EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)

EEC - European Economic Community

EINECS - European Inventory of Existing Commercial Substances

ELINCS - European List of notified Chemical Substances

EN - European Standard

EQS - Environmental Quality Standard

EU - European Union

Euphrac - European Phrase Catalogue

EWG - European Waste Catalogue (replaced by LoW – see below)

GES - Generic Exposure Scenario

GHS - Globally Harmonized System

IATA - International Air Transport Association

ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG - International Maritime Dangerous Goods

IMSBC - International Maritime Solid Bulk Cargoes

IT - Information Technology

IUCLID - International Uniform Chemical Information Database

IUPAC - International Union for Pure Applied Chemistry

JRC - Joint Research Centre

Kow - octanol-water partition coefficient

LC50 - Lethal Concentration to 50 % of a test population

LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)

LE - Legal Entity

LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)

LR - Lead Registrant

M/I - Manufacturer / Importer

MS - Member States

MSDS - Material Safety Data Sheet

OC - Operational Conditions

OECD - Organization for Economic Co-operation and Development

OEL - Occupational Exposure Limit

OJ - Official Journal

OR - Only Representative

OSHA - European Agency for Safety and Health at work

PBT - Persistent, Bioaccumulative and Toxic substance

PEC - Predicted Effect Concentration

PNEC(s) - Predicted No Effect Concentration(s)

PPE - Personal Protection Equipment

(Q)SAR - Qualitative Structure Activity Relationship

REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

RID - Regulations concerning the International Carriage of Dangerous Goods by Rail

RIP - REACH Implementation Project

RMM - Risk Management Measure

SCBA - Self-Contained Breathing Apparatus

SDS - Safety data sheet

SIEF - Substance Information Exchange Forum

SME - Small and Medium sized Enterprises

STOT - Specific Target Organ Toxicity

(STOT) RE - Repeated Exposure

(STOT) SE - Single Exposure

SVHC - Substances of Very High Concern

UN - United Nations

vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H290 May be corrosive to metals.

H318 Causes serious eye damage.